

THE ANTHOMYIIDAE AND MUSCIDAE OF THE
PRESIDENTIAL RANGE IN NEW HAMPSHIRE (DIPTERA)

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Abstract.—Hockett, H. C., Long Island Vegetable Research Farm, Cornell University, Riverhead, New York 11901.—A survey of the Anthomyiidae and Muscidae occurring on the upper region of the Presidential Range in New Hampshire was made during the early summer of 1954, 1955, 1956, from bases at the Lakes of the Clouds and at Madison (Maps 1 and 2). The collections of adults included 62 anthomyiid species and 1 subspecies and 117 muscid species and one subspecies out of a total of 5,667 specimens. To this has been added separately a number of specimens in the collections of Mrs. A. T. Slosson, made at the turn of the century, and that I have been able to identify. The names cited in her records as *Coenosia albicornis* and *Aricia vagans* are misapplied. I regard these specimens as belonging respectively to the species *Coenosia (Limosia) compressa* Stein and *Lasiops albibasalis* (Zetterstedt) new synonymy.

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Introduction

This investigation is the third of a series of studies on the families Anthomyiidae and Muscidae (Diptera) occurring on the upper slopes of the Appalachian Range. The present work was carried out in 1954-1956 on the Presidential Range of mountains in New Hampshire, motivated by the same desire as previously of providing an adequate list of the fauna in view of the apparent increasing menace to the habitat of many of the species, a condition brought about by the requirements for additional trail and camping facilities. Such influences have been fully discussed by Goff, Smith, and others (1976), and by Bliss (1963).

Collections in the southern region of the Range, from Oakes Gulf to the Great Gulf, a distance of approximately 3½ miles, were made during the latter half of June to mid July in 1954 under favorable weather conditions, and also in 1956, when the season proved to be unfavorable owing to the blanket of clouds covering the Range, and to the drop in temperatures. The various localities within the area were visited from the A.M.C. hut at the Lakes of the Clouds.

I have received a valuable collection of specimens taken in this region by various members of the Entomology Institute at Ottawa through the courtesy of Dr. J. R. Vockeroth, and to them I am deeply indebted. Among this material are the notable records of *Delia linearis* (Stein) and *Spilogona argentiventris* (Malloch) from the summit of Mt. Washington. Also through-

out the years I have been granted the privilege and opportunity of consulting the collections of anthomyiid and muscid flies at the United States National Museum, the Museum of Comparative Zoology (MCZ) at Cambridge, and of the Boston Society of Natural History. To the curators, past and present, in charge of these collections at the various institutions I am deeply obligated for favors conferred.

I visited the northern sector of the Presidential Range, from Mt. Adams to Mt. Madison, a distance of approximately $3\frac{1}{4}$ miles, in late June to mid July of 1955 under favorable weather conditions. The various localities were reached from the A.M.C. hut at Madison, situated slightly below the col that separates Mt. Adams from Mt. Madison.¹

Previous Records

References to the anthomyiid and muscid fauna of the Presidential Range are mainly scattered throughout the literature, occurring in articles dealing with subjects of wider scope, or are confined chiefly to records on Mt. Washington itself and the immediate surroundings. Slosson (1895-1902) in her list of insects collected in the alpine region of Mt. Washington records the names of approximately 39 nominal species belonging to the families Anthomyiidae and Muscidae. Many of the specimens were sent to Coquillett at Washington for determination. In the catalog of Diptera in North America (1965) 34 of these names are of species occurring in the nearctic region, 14 of which are placed in synonymy, 4 of names falsely applied, *cunctans* Meigen, *vagans* Fallen, *litorea* Fallen, *carbonella* Zetterstedt and 2 remain unplaced, *albicornis* Meigen, *fuscopunctata* Macquart.

In my visits to the museum at Washington for the purpose of studying the northern muscid fauna of the continent I have been accorded the opportunity of examining some of the specimens that were originally in the collections of Mrs. Slosson. These records I have separately included in the following list for the Presidential Range. Among the material I have been able to find a female specimen determined by Coquillett as *Coenosia albicornis* Meigen, that I regard as belonging to *Coenosia compressa* Stein, and in addition a male of the same species without Coquillett's handwritten label. Similarly I have found a female specimen determined as *Aricia vagans* Fallen, that in my opinion belongs to *Lasiops albibasalis* (Zetterstedt). Of the remaining names in Slosson's list of alpine species I regard those referring to *urbana*, *pagana*, *uliginosa* and *hispida*, as requiring further confirmation for acceptance. So far as I am aware the identity of *Lispe hispida* Walker is unknown.

Johnson (1925) in his list of the Diptera of New England included the names of 120 nominal species from the White Mountains, of which 32 are cited from the upper slopes of Mt. Washington. To the latter I have arbitrarily added the localities Base Station at 2,600 feet elevation and Half-

way House at 3,840 ft. Many of the names for species have been taken from the Slosson list, or the names have been noted in the synonymy recorded in the catalog of Diptera in North America (loc. cit.). Johnson records in his list that the name *Lasiops cunctans* is misapplied, a claim based on receiving a specimen named *cunctans* from Mrs. Slosson, that belonged to the species *Lasiops innocuus* (Zetterstedt). The name *Mydaea rugia* Walker has been shown by Snyder (1949) to refer to specimens belonging to the species *Mydaea palpalis* Stein.

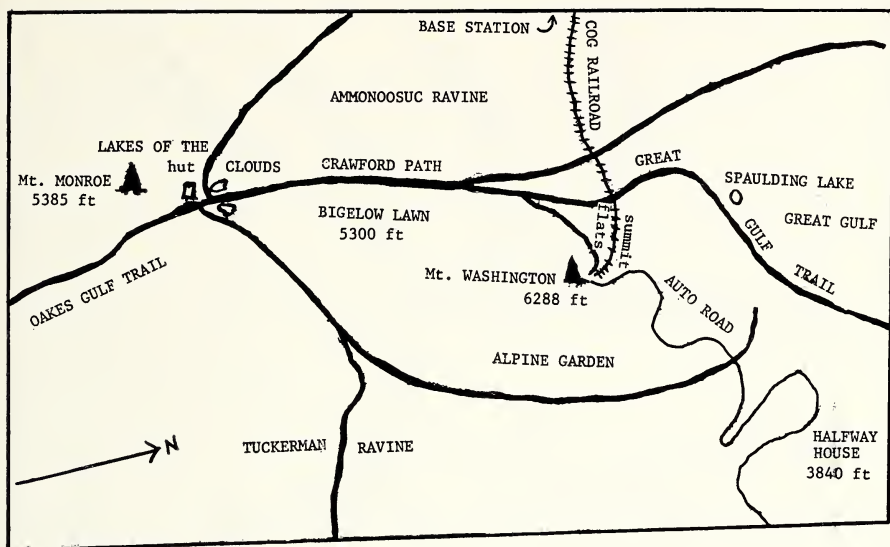
Among what may be considered typographical errors or misunderstanding may be mentioned the following: the name *calophaga* for *calopyga* in the genus *Xenocoenosis*; the name *Macrocoenia* for *Macrocoenosis*; the entry "Mt. Washington (Mrs. Slosson); White Mts. (Morrison)" under *Bithoracochaeta leucoprocta* (Wiedemann). This record is apparently misplaced as indicated by the reference cited in the text, and thus should be transferred to the species *Ophyra leucostoma* (Wiedemann). I remain in doubt as to whether "Mt. Washington" should be a part of the transfer.

Chillcott (1961) in his review of the nearctic species of Fanniinae has included the names of 15 species from the White Mountains in New Hampshire. The presence of *Fannia canicularis* (Linnaeus) and *Fannia scalaris* (Fabricius) is not given owing evidently to their reputed wide occurrence in North America. Eight of the species from the White Mountains are cited as having been taken in the higher regions of the Presidential Range. Of these, seven belong to the genus *Fannia*, namely *abrupta*, *immaculata*, *melanura*, *meridionalis*, *postica*, *sociella*, *spathiophora*, and one to the genus *Coelomyia*, namely *C. subpellucens* (Zetterstedt). All except *canicularis* and *scalaris* are represented in the present survey.

The remaining records pertaining to the anthomyiid and muscid fauna may be found in articles dealing with Diptera of wider geographical range. Among such may be found the contributions of Malloch for the years 1913l, 1920a, 1923a, 1924h, and of Hockett, 1932, 1941, as given in the bibliography to the catalog of Diptera in North America (loc. cit. pp. 1117-1547).

Abbreviations

In order to save space the various locations on the Presidential Range from which specimens were obtained have been assigned a letter, such as A, B, C, and also for each species the number of specimens from all locations have been combined. The locality Mt. Washington (A) has been reserved for species whose specimens are so labelled and without further detail. I have also added separately specimens having the label "In the collections of Mrs. A. T. Slosson" that I have been able to identify, and that are in the collections of the United States National Museum unless otherwise indicated.



Sketch Map 1. The southern region of the Presidential Range showing localities for collecting. Distances from the A.M.C. hut at the Lakes of the Clouds to Oakes Gulf are approximately $\frac{1}{2}$ mile; to Tuckerman Ravine, .75 mile; to Alpine Garden, 1 mile; to summit of Mt. Washington, 1 mile; from Halfway House to summit of Mt. Washington, 4 miles.

Southern region of the survey.—A, Mt. Washington; B, Base Station, 2,600 ft.; C, Lakes of the Clouds hut, 5,050 ft.; D, Upper Oakes Gulf and trail; E, Upper Ammonoosuc Ravine; F, Crawford Path, 4,500 ft.; G, Bigelow Lawn, 5,200 ft.; H, Upper Tuckerman Ravine; I, Alpine Garden, 4,800 to 5,200 ft.; J, Spaulding Lake, 4,250 ft.; K, Great Gulf to summit flats; L, Halfway House, 3,840 ft.; M, Auto road, 4,000 to 5,500 ft.; N, Summit flats, Mt. Washington; O, Summit of Mt. Washington, 6,288 ft.

Northern region of the survey.—P, Upper Valley Way to Madison hut, 4,825 ft.; Q, Upper Bruin trail; R, Durand Ridge and crossover; S, King Ravine trail; T, Mt. Quincy Adams, 5,470 ft.; U, Star Lake, 4,925 ft.; V, Gulfside trail, Mt. Adams; W, Adams Slide to summit of Mt. Adams, 5,798 ft.; X, Madison Gulf and trail; Y, Parapet trail; Z, Summit trail to Mt. Madison, 5,363 ft.

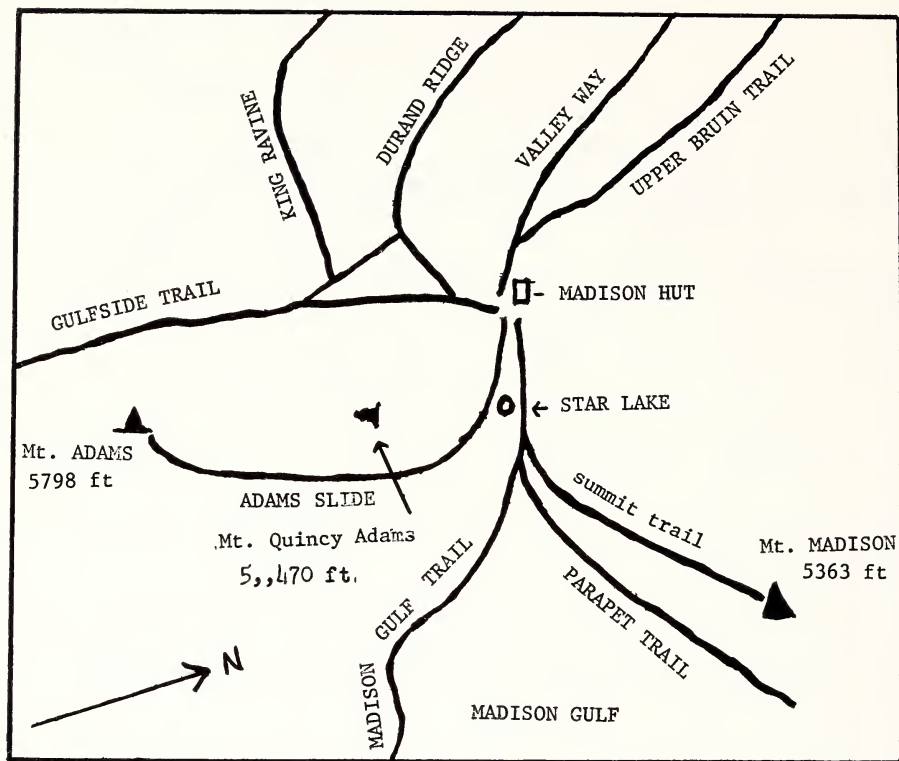
List of Species and Locality Records

Family Anthomyiidae *Sensu stricto*

Fucellia tergina (Zetterstedt), 3♂, 5♀. C, D, I.

Chirosia pusillans (Huckett), 2♂, 4♀. H, J.

Chirosia stratifrons (Huckett), 1♂, 1♀. G, H.



Sketch Map. 2. The northern region of the Presidential Range showing localities for collecting. Distances from A.M.C. Madison hut to Mt. Madison, .45 mile; to summit of Mt. Adams, .9 mile; to Star Lake, .1 mile; from Randolph to Madison hut by Valley Way trail, $3\frac{1}{4}$ miles.

Hylemya alcaethoe (Walker), 2♂, 2♀. P, Z.

Hylemya latifrons (Schnabl), 5♂, 5♀. C, D, G, I.

Hylemyza partita (Meigen), 3♂, 2♀. C, G, K, J.

Delia alaba (Walker), 10♂, 7♀. C, D, H, I; W, Y.

Delia cupricrus (Walker), 21♂, 1♀. D, I; M, X.

Delia egleformis (Huckett), 57♂, 1♀. P, R, W.

Delia florilega (Zetterstedt), 38♂, 2♀. C, D, H; U, V, W, X.

Delia linearis (Stein), 1♂. O.

Delia platura (Meigen), 266♂, 282 ♀. C, D, E, F, G, H, I-K, N; P, Q, R, S, T, U-X, Y, Z.

Delia pluvialis (Malloch), 1♂. M.

Delia setitarsata (Huckett), 1♀. J.

- Delia tarsata* (Ringdahl), 496♂, 109♀. A, C, D, E, F, G, H, I, J, K, M; P, S, U, V, W, X, Y.
- Delia tarsifimbria* (Pandelle), 64♂, 3♀. P, Q, R, S, W, X, Y, Z.
- Botanophila anane* (Walker) = *Hammomyia setigera* Johannsen (Huckett, 1971), 1♂, 2♀. B.
- Pegohylemyia fugax* (Meigen), 9♂, 9♀. D, G, H, I, O; R, Q, W, X, Y, Z.
- Pegohylemyia hucketti* Ringdahl, 2♀. C; Y.
- Pegohylemyia obscura* (Zetterstedt) = *Hylemyia sericea* Malloch, det. Ackland, new synonymy.² 1♂, 1♀. I.
- Pegohylemyia profuga* (Stein), 7♂, 5♀. C, D, F; Q, R, W, X.
- Pegohylemyia relativa* Huckett, 5♂, 1♀. Q, R, W, X, Z.
- Paregle aestiva* (Meigen), 2♂. D, H.
- Paregle cinerella* (Fallen), 1♀. U.
- Paregle radicum* (Linnaeus), 12♂, 4♀. E, J, K, N; P, S, X, Y.
- Lasiomma octoguttatum* (Zetterstedt), 3♂, 2♀. D, M; W, X.
- Acrostilpna atricauda* (Zetterstedt), 3♂, 6♀. B, G, I; U, Z.
- Acrostilpna consobrina* (Huckett), 1♂, 1♀. I, L. (2♂, 1♀, Mt. Washington, A. T. Slosson, HCH.)
- Acrostilpna flavipennis* (Walker) = *Acrostilpna replicata* Huckett, det. 1971. 1♂. J.
- Acrostilpna latipennis* (Zetterstedt), 9♂. D, J; Z.
- Acrostilpna restorata* Huckett, 1♂. Q.
- Crinurina cuneicornis* (Zetterstedt), 13♂, 4♀. C, D, F, G; H, I, K.
- Eremomyia pilimana* (Ringdahl), 2♂, 5♀. B, G, J, K.
- Eremomyioides cylindrica* (Stein), 1♂, 5♀. H, I.
- Emmesomyia epicalis* Malloch, 1♂. J.
- Pegomya bicolor* (Wiedemann), 1♀. X.
- Pegomya frigida* (Zetterstedt), 3♂, 3♀. C, I; Q, T, X.
- Pegomya fulgens* (Meigen), 1♂. P.
- Pegomya incisiva* Stein, 1♀. Q.
- Pegomya labradorensis* Malloch, 1♀. N.
- Pegomya lipsia* (Walker), 3♂, 1♀. D, H.
- Pegomya pilosa* Stein, 3♂. S, X.
- Pegomya rubivora* (Coquillett), 1♂. J.
- Pegomya tabida* (Meigen), 1♂. H.
- Pegomya tenera* (Zetterstedt), 2♂, 1♀. C, M; S.
- Pegomya transgressa* (Zetterstedt), 1♂. S.
- Pegomya winthemi* (Meigen), 1♀. B.
- Pegomya zonata* (Zetterstedt) = *Musca rufipes* Fallen, nom. preoc. (Hennig, 1973), 1♀. L.
- Nupedia acutipennis* (Malloch), 2♂. E, H.

- Nupedia infirma* (Meigen), 9♂, 16♀. C, J, K, M, N, O; P, R, V, W, X.
Nupedia nigroscutellata (Stein), 5♂. L; Q.
Nupedia patellans (Pandelle), 9♂, 45♀. J, K; P, R, S, U, W, X, Z.
Pseudonupedia intersecta arctica (Ringdahl), *syn. ssp. arctica* (Huckett),
 det. Hennig, 1972 p. 439, 2♀. Q, X.
Hydrophoria alpina Huckett, 6♀. E, I, N. (2♂, 1♀, Mt. Washington, A. T. Slosson, HCH.)
Hydrophoria conica (Wiedemann), 5♂, 18♀. B, D, E, G, H, J, K.
Hydrophoria implicata Huckett, 2♂, 1♀. B, G, J.
Leucophora marylandica (Malloch), 1♂. L.
Paraprosalpia angustitarsis (Malloch), 1♀. C.
Paraprosalpia brunneigena (Schnabl) = *Prosalpia incisa* Ringdahl (Hennig, 1969;11), 3♂. J.
Paraprosalpia conifrons (Zetterstedt), 83♂, 21♀. C, D, H, I, J, K; P, R, T, U, X, Y.
Paraprosalpia littoralis (Malloch), 6♂, 5♀. C, H, I, J; P, X.
Paraprosalpia pilitarsis (Stein), 2♂. J.
Paraprosalpia silvestris (Fallen), 1♂, 1♀. M; V.

Family Muscidae

- Schoenomyza dorsalis* Loew, 2♂, 12♀. U, X, Y.
Schoenomyza litorella (Fallen), 1♀. B.
Coenosia tigrina (Fabricius), 1♀. D.
Limosia atrata (Walker), 2♂, 19♀. B, C, G, I; Q, T, U, W, Y.
Limosia compressa (Stein) = *Coenosia albicornis* Slosson not Meigen, 1♂, 4♀. L, O; Q. (1♂, 1♀, Mt. Washington, A. T. Slosson.)
Limosia conforma Huckett, 6♂, 6♀. G, N, O; S, U, X, Z.
Limosia errans (Malloch), 1♂, 11♀. G; U, W, Z.
Limosia fuscifrons (Malloch), 1♀. J.
Limosia lata (Walker), 3♂, 3♀. R, W, Z.
Limosia nigrescens (Stein), 1♂, 2♀. G; M.
Limosia toshua Huckett, 1♀. M.
Limosia triseti (Stein), 2♀. O.
Hoplogaster morrisoni Malloch, 1♂, 2♀. S, X.
Hoplogaster octopunctata (Zetterstedt), 15♂, 38♀. C, E, G, I, K.
Neodexiopsis calopyga (Loew), 1♀. N.
Neodexiopsis ovata (Stein), 3♀. O; U.
Macrorchis ausoba (Walker), 10♂, 2♀. C, D, E, G, H, J, K.
Lispocephala aemulata Huckett, 1♀. B.
Lispocephala alma (Meigen), 5♀. H, I, K.
Lispocephala brevitarsis Malloch, 1♀. U.
*Lispocephala erythrocer*a (Robineau-Desvoidy), 1♂, 10♀. D, H.

- Lispocephala pallipalpis* (Zetterstedt), 5♀. Q, U.
Lispocephala spuria (Zetterstedt)³ = *Lispocephala vitripennis* Ringdahl
 (Collin, 1963; 280), 1♂, 2♀. D, J, M.
Lispocephala varians Malloch, 3♀. D, I.
Lispocephala verna (Fabricius), 1♀. J.
Pentacricia aldrichii Stein, 1♀. M.
Lispe albitarsis Stein, 1♀. J.
Lispe cotidiana Snyder, 3♀. G, J; X.
Spilogona acuticornis (Malloch), 1♂. L.
Spilogona alticola (Malloch), 19♂, 47♀. B, C-G, H, I, J, K; P, Q, S, V,
 X. (1♀, Mt. Washington, A. T. Slosson, allotype MCZ.)
Spilogona arctica (Zetterstedt), 30♂, 18♀. A, C, D, F, H, I, L, M; P, Q,
 R, S, U, V, W, X, Y, Z.
Spilogona argenteiceps Malloch, 42♂, 11♀. H, I; P, Q, S, T, V, X.
Spilogona argentiventris (Malloch), 1♀. O.
Spilogona baltica (Ringdahl), 1♂. D.
Spilogona caroli (Malloch), 10♂, 16♀. D, H, I; Q, V, X, Z.
Spilogona forticula Hockett, 4♂, 1♀. V, X.
Spilogona gibsoni (Malloch), 88♂, 45♀. B, C, H, J, K, M, N; Q, S, T, U,
 V, W-Z. (1♂, 1♀, Mt. Washington, A. T. Slosson.)
Spilogona hypopygialis Hockett, 4♂. H, I.
Spilogona limnophorina (Stein), 3♂. C, N, O.
Spilogona magnipunctata (Malloch), 185♂, 87♀. C, D, E, G, H, I, J; Q,
 S, T, U, V-Z.
Spilogona monacantha Collin, 65♂, 157♀. G, H; P, Q, R, S, T, U, V, W, X,
 Y, Z. (1♀, Mt. Washington, A. T. Slosson.)
Spilogona nigriventris (Zetterstedt), 2♂, 1♀. C, H, L.
Spilogona novemmaculata (Zetterstedt), 2♂, 3♀. D, H.
Spilogona placida Hockett, 1♂, 3♀. J, H.
Spilogona semiglobosa (Ringdahl), 4♂, 5♀. Q, T, V, X, Y, Z.
Spilogona setilamellata Hockett, 3♂, 6♀. D, H, I; X.
Spilogona sororcula (Zetterstedt), 5♂, 4♀. B, D, E, H; X.
Spilogona suspecta (Malloch), 7♂, 4♀. C, I; M, N, X, Z.
Spilogona trigonata (Zetterstedt), 6♂. C, G, J.
Spilogona trigonifera (Zetterstedt), 20♂, 7♀. D, E, F, G, H, I, K, M, O;
 Q, R, W.
Helina consimilata Malloch, 1♀. C.
Helina maculipennis (Zetterstedt), 5♂, 9♀. A, C, D, I; P, Q, S. (1♂, Mt.
 Washington, A. T. Slosson.)
Helina obscurata (Meigen), 3♀. Q, S, U.
Helina obscurinervis (Stein), 3♀. B, C, J.
Helina pectinata (Johannsen), 2♂, 3♀. B, D, J.

- Helina rothi* Ringdahl, 9♂, 21♀. B, C, D, E, G, H, I, J, K.
- Quadrularia annosa* (Zetterstedt), 9♂, 19♀. D, E, G, H, I, J, K. (2♀, Mt. Washington, A. T. Slosson.)
- Quadrularia laetifica* (Robineau-Desvoidy), 83♂, 80♀. B, C, D, E, G, H, I, J, K; P, Q, R, T, U-Z.
- Hebecnema affinis* Malloch, 4♂. E, H, K.
- Hebecnema vespertina* (Fallen), 7♂, 3♀. B, D, E, H; X.
- Mydaea brevopilosa* Malloch, 3♀. C, D, H.
- Mydaea discimana* Malloch, 3♀. I; X, Y.
- Mydaea electa* (Zetterstedt), 2♀. C, K.
- Mydaea furtiva* Stein, 3♀. C, H, I.
- Mydaea neglecta* Malloch, 3♀. R, X.
- Mydaea nubila* Stein, 33♂, 26♀. P, Q, R, S, T, W, X.
- Mydaea obscurella* Malloch, 3♀. D; V, W.
- Mydaea occidentalis* Malloch, 1♂. B.
- Mydaea palpalis* Stein, 56♂, 11♀. B, C, D, E, G, H, I, J, K, L.
- Myospila mediatunda* (Fabricius), 3♂, 13♀. C, D, H, I; P, R, S, Y.
- Fannia abrupta* Malloch, 25♂, 14♀. A, B, C, H, J; P, R, S, U, V, W, X.
- Fannia aethiops* Malloch, 1♂. H.
- Fannia bradorei* Chillcott?, 1♀. A.
- Fannia brevipalpis* Chillcott, 1♀. P.
- Fannia ciliatissima* Chillcott, 2♀. E; S.
- Fannia fuscata* (Fallen), 1♂. J.
- Fannia immaculata* Malloch, 2♂. W, Z.
- Fannia melanura* Chillcott, 1♂, 4♀. A; U, X.
- Fannia meridionalis* Chillcott, 1♀. A.
- Fannia meridionalis* Chillcott, 1♂. A.
- Fannia metallipennis* (Zetterstedt), 2♂, 8♀. L; P, R, S, U, W.
- Fannia postica* (Stein), 4♂, 13♀. H, I; Q, R, S, T, U, W, Y, Z.
- Fannia rondanii* (Strobl), 1♂, 8♀. J, L; U.
- Fannia sociella* (Zetterstedt), 32♂, 16♀. A, C, E, J, M; P, Q, S, U, W, X.
- Fannia spathiophora* Malloch, 1♂, 71♀. S, U, W.
- Coelomyia subpellucens* (Zetterstedt), 69♂, 39♀. A, C, D, E, F, G, H, I, J, K; P, Q, R, S, T, U, W, X.
- Piezura graminicola* (Zetterstedt), 1♀. X.
- Azelia cilipes* (Haliday), 2♀. D; Z.
- Hydrotaea militaris* (Meigen), 13♂, 138♀. B, C, D-H, I, J, K; P, Q, R, S, T-X, Y, Z.
- Hydrotaea pilipes* Stein, 1♂. B.
- Hydrotaea pilitibia* Stein, 34♀. J, K; P, Q, R, S, T, V, W, X.
- Hydrotaea spinifemorata* Hockett, 1♀. C.
- Lasiops albibasalis* (Zetterstedt) = *Aricia vagans* Coquillett not Fallen, ♀.

- 11♂, 16♀. B, C, D, G, N; P, R, S, T, V, W, X. (1♂, 3♀, Mt. Washington, A. T. Slosson.)
- Lasiops furcatus* (Zetterstedt), 2♂, 3♀. G, H, J, K.
- Lasiops hirtulus* (Zetterstedt), 197♂, 218♀. C, D, E, F-I, L, M, N, O; R, S, U, V-Y, Z. (2♂, 1♀, Mt. Washington, A. T. Slosson.)
- Lasiops innocuus* (Zetterstedt), 14♂, 69♀. C, D, I, M, N; P, Q, R, S, T, U, V, W, X, Y Z.
- Lasiops rufisquama* (Schnabl), 1♀. Q.
- Lasiops septentrionalis* (Stein), 54♂, 85♀. B, C, D, F, H, I, M; P, R, T, U, V, W, X, Y. (2♂, Mt. Washington, A. T. Slosson.)
- Lasiops spiniger* (Stein), 180♂, 481♀. B, C, D, E, F-L, M, N, O; P, Q, R, S-W, X, Y, Z. (2♂, 5♀, Mt. Washington, A. T. Slosson.)
- Alloeostylus diaphanus* (Wiedemann), 4♂, 8♀. B, L; P, Q, X.
- Phaonia apicata* Johannsen, 1♂, 3♀. P, R, U, Y.
- Phaonia brevispina* Malloch, 1♀. O.
- Phaonia cauta* Hockett, 2♀. D; T.
- Phaonia curvipes* (Stein), 3♀. D.
- Phaonia errans* (Meigen), 1♂, 5♀. D; P, Q, T, X.
- Phaonia errans completa* Malloch, 1♂. B.
- Phaonia fraterna* Malloch, 1♂. G.
- Phaonia pratensis* (Robineau-Desvoidy) = *Musca laeta* Fallen, *nom. preoc.* (Hennig, 1963; 857), 1♂. I.
- Phaonia protuberans* Malloch, 249♂, 228♀. A, B, C, D-I, J, K, L; P, R, S, U, V, W, X, Y. (1♀, Mt. Washington, A. T. Slosson, HCH.)
- Phaonia serva* (Meigen), 1♂, 5♀. D, F, I, L; Z.
- Phaonia subfuscinervis* (Zetterstedt), 4♂, 18♀. C, D, H, I.
- Phaonia tipulivora* Malloch, 1♂, 1♀. H, L.
- Phaonia winnemanæ* Malloch, 1♀. Mt. Washington, A. T. Slosson, (HCH).
- Lophosceles cinereiventris* (Zetterstedt), 13♂, 15♀. C, E, G, H, K, N; P, S, U, W, X.
- Lophosceles frenatus* (Holmgren), 25♂, 4♀. A, D; P, Q, T, X, Y.
- Mesembrina latreillii* Robineau-Desvoidy, 18♀. C, D, F; P, R, W, X.
- Morellia micans* (Macquart), 1♀. D.
- Musca domestica* Linnaeus, 2♂, 1♀. C, I.
- Stomoxys calcitrans* (Linnaeus), 2♀. C.

Summary

In both families the species collected indicated a strong northerly thermophygic affinity (Bradley, 1956). Twenty genera of Anthomyiidae and 28 of Muscidae were recognized, including the genera *Eremomyioides* and *Pentacricia* known only to occur in North America, and the neotropical genus *Neodexiopsis* (Pont, 1972).

The family Anthomyiidae was represented by 38 species that occur in the palearctic and nearctic regions, and 24 species and one subspecies known only from the nearctic. The following species occurring in both regions were found to be most numerous, *Delia platura* (Meigen), *D. tarsata* (Ringdahl), *D. tarsifimbria* (Pandelle), *D. florilega* (Zetterstedt), *Nupedia patellans* (Pandelle), *Paraprosalpia conifrons* (Zetterstedt). The species *Delia egleformis* (Huckett), known only from the nearctic region, numbered 56 specimens taken in three localities. Anthomyiid species that are known to have extended their range to the coasts of Greenland were *Fucellia tergina* (Zetterstedt), *Delia platura* (Meigen), *Pegohylemyia profuga* (Stein), *Paregle cinerella* (Fallen), *Paregle radicum* (Linnaeus), *Lasiomma octoguttatum* (Zetterstedt), *Pegomya pilosa* Stein, *Pegomya tenera* (Zetterstedt), *Pegomya zonata* (Zetterstedt), and the subspecies *Pseudonupedia intersecta arctica* (Ringdahl). Forty-two of the species were collected in succeeding years on Mt. Katahdin in central Maine, and 27 in the Great Smoky Mountains and on Mt. Mitchell in North Carolina (Huckett, 1972, 1974).

In the family Muscidae 117 species and one subspecies were recognized, of which 57 are known to occur in the palearctic and nearctic regions, and 60 species and one subspecies restricted to the nearctic. Species occurring in both regions and found to be most numerous included *Hoplogaster octopunctata* (Zetterstedt), *Spilogona arctica* (Zetterstedt), *Spilogona triangularifera* (Zetterstedt), *Quadrularia laetifica* (Robineau-Desvoidy), *Mydaea palpalis* Stein, *Fannia sociella* (Zetterstedt), *Fannia spathiophora* Malloch, *Coelomyia subpellucens* (Zetterstedt), *Hydrotaea militaris* (Meigen), *Hydrotaea pilitibia* (Stein), *Lasiops albibasalis* (Zetterstedt), *L. hirtulus* (Zetterstedt), *L. innocuus* (Zetterstedt), *L. spiniger* (Stein), *Lophosceles cinereiventris* (Zetterstedt), *L. frenatus* (Holmgren). Muscid species occurring only in the nearctic region and found to be more numerous included *Spilogona alticola* (Malloch), *S. argenteiceps* Malloch, *S. gibsoni* (Malloch), *S. magnipunctata* (Malloch), *S. monacantha* Collin, *Mydaea nubila* Stein, *Fannia abrupta* Malloch, *Lasiops septentrionalis* (Stein), *Phaonia protuberans* Malloch. The following species are also recorded from the coasts of Greenland, *Spilogona arctica* (Zetterstedt), *S. baltica* (Ringdahl), *S. monacantha* Collin, *S. semiglobosa* (Ringdahl), *S. trigonifera* (Zetterstedt), *Lophosceles frenatus* (Holmgren), *Musca domestica* Linnaeus. Seventy-six of the species collected on the Presidential Range were also taken on Mt. Katahdin, and 50 in the Great Smoky Mountains and on Mt. Mitchell in North Carolina.

The occurrence of a single specimen of *Spilogona argenteiventris* (Malloch) on the summit of Mt. Washington is noteworthy for the departure from the pattern of its known distribution in western North America.

Names of Collectors

Becker, E. C.	Morse, A. P.
Blanton, F. S.	Munroe, E. G.
Dimmock, G.	Reiff, W.
Huckett, H. C.	Shewell, G. E.
Johnson, C. W.	Slosson, A. T.
Mason, W. R. M.	Townsend, C. H. T.
Melander, A. L.	Vockeroth, J. R.
Morrison, H. K.	Walley, G. S.

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Footnotes

¹The length of the Range from Mt. Monroe in the south to Mt. Madison in the north is roughly 7½ miles by trail. Mt. Washington, located slightly south of the various peaks at midway, is situated at 71°18'W, and 44°16'N.

²Mr. D. M. Ackland has made an examination of the genitalia of two males of *Pegohylemyia sericea* (Malloch) taken respectively at Savonoski, Alaska, and Mt. Katahdin, Maine, with that of *Pegohylemyia obscura* (Zetterstedt) found in Scotland, and has concluded there were virtually no specific differences.

³*Lispocephala spuria* (Zetterstedt) was incorrectly referred to as *surda* in my remarks concerning *Lispocephala aemulata* (Huckett, 1972; 231).